

(((ECHOMETER))))

Wireless Echometer Hardware

The Wireless Echometer Base Station, with GPS well site location, is connected to the USB port of the computer and communicates with all the Wireless sensors that include:



- Wireless Remote Fire Gas Gun (WRFG)
- Wireless 5000 PSI Gas Gun (W5K)
- Wireless Polished Rod Transducer (WPRT)
- Wireless Horse Shoe Transducer (WHT)
- Wireless Pressure Sensor (WPT)*
- Wireless Power Probe (WPP)*

The Base Station allows simultaneous acquisition of liquid level, dynamometer, pressure and power records as controlled by the user via the TAM software either at the laptop or at the sensor location.

The Wireless Sensors have been designed with state of the art microchips to achieve low noise, high accuracy and resolution with minimum power usage for long life of the rechargeable batteries. Typical range of over 450 ft has been achieved in most installations.



Wireless sensor set up and installation is done efficiently by using the control buttons and LED displays, mounted on the sensor's body, which are used to power up, adjust, and calibrate the sensors when installed at the wellhead without having to view the computer screen.

For more information please request a copy of the paper "Wireless Simultaneous Acquisition of Dynamometer and Fluid Level Facilitates Rod Pumped Well Optimization" by contacting Echometer Company at the address below or via www.echometer.com

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TAM Software and Wireless Well Monitoring Equipment*



TAM (Total Asset Monitor) is the next generation of Echometer data acquisition and analysis software used with combinations of wireless and wired fluid level and dynamometer equipment. It was designed with the objectives of:

Improved Experience at Well

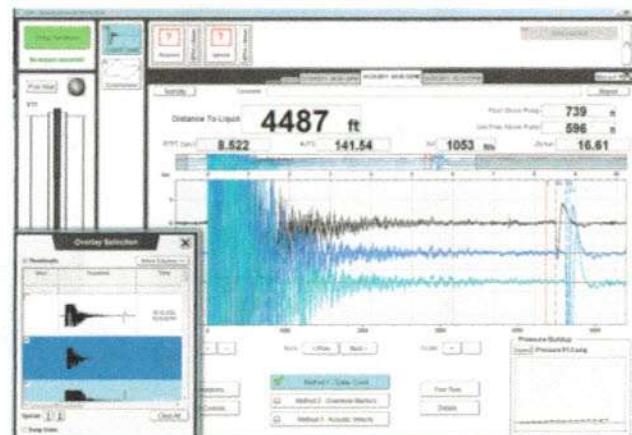
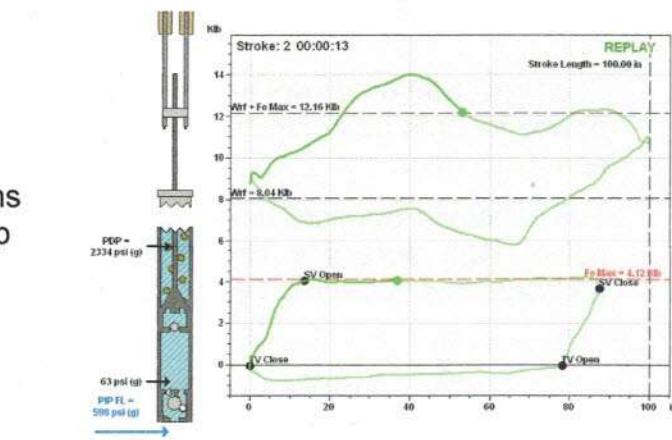
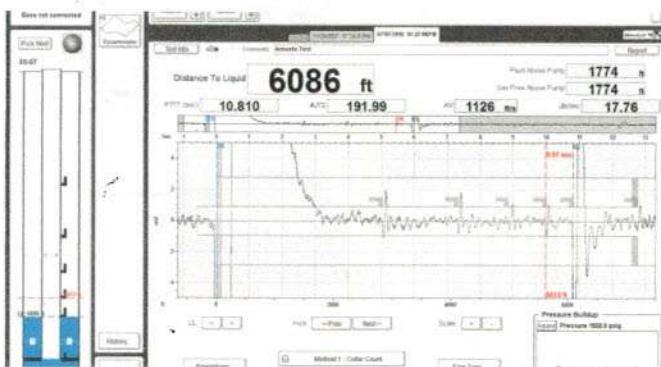
- Streamline Workflow
- Easier and Faster Installation
- Easier Software Navigation
- Automatic Well Selection
- Simultaneously Acquire Multiple Data Streams
- Minimize Walks between Sensors and Laptop

Enhanced Analysis Options

- Real Time surface and pump dynamometer
- Flexible dynamometer and acoustic overlays
- Strokes Playback and video generation

Enhanced Visualization

- View Analyses and Results at a Glance
- Detailed Wellbore Description
- Depth reference and wellbore overlay
- Pump operation and fillage animation
- Detailed pump analysis



Existing well information and data that were acquired with the Echometer Well Analyzer can be imported automatically into TAM from TWM files.

Automatic analysis of acoustic record yields accurate results in most cases without need of operator intervention but software provides advanced analysis tools for those wells where it is difficult to clearly identify the liquid level echo.

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*May be protected by patents 5285388, 5406482, 5464058, 5589633, 6014609 and others pending

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